

WHAT IS CLAIMED IS:

1. A playing surface structure comprising:
a surface carpet layer;
a resin impregnated textile layer;
5 at least one random pile layer comprising a compact
resin loaded fibre stratum;
at least one layer of stratified fibrous material;
wherein the surface carpet layer overlays the
textile layer, the textile layer overlays such random
10 pile layer, and the layer of stratified fibrous material
is overlain by the or at least one random pile layer.
2. A structure according to Claim 1 wherein the
layer of stratified fibrous material is a lapped fibre
15 layer.
3. A structure according to Claim 2 wherein the
lapped fibre layer is lapped vertically.
- 20 4. A structure according to Claim 1 comprising a
plurality of alternating random pile layers and layers of
stratified fibrous material.
- 25 5. A structure according to Claim 1 wherein the
layer of stratified fibrous material overlays a further
random pile layer.

5 6. A structure according to Claim 1 wherein the random pile layer is a layer having fibres that extend generally in vertical and in horizontal directions, and in angular directions inclined both vertical and horizontal.

10 7. A structure according to Claim 1 wherein pile of the or at least one random pile layer is laden with particulate material.

15 8. A structure according to Claim 1 wherein the random pile layer is at least partially covered with a layer of particulate material.

20 9. A structure according to Claim 8, wherein at least a portion of the particulate material in the layer covering the random pile layer is rubber and is bonded to the resin impregnated textile layer.

25 10. A structure according to Claim 1 wherein the carpet layer includes a pile which is laden with particulate material.

30 11. A structure according to Claim 1 wherein the pile of the random pile layer is laden with particulate material which comprises one of:

- i) sand;
- ii) rubber particles;
- iii) sand and rubber particles.

12. A structure according to Claim 7 wherein the particulate material is brushed into the random pile layer.

5 13. A playing surface structure according to claim 1 comprising, in order:

 a surface carpet layer having a sand laden pile;

 a resin impregnated textile layer optionally having rubber particles bonded thereto;

10 a first random pile textile mat which is laden with rubber particles, and which comprises a compact resin bonded fibrous stratum;

 a vertically lapped textile mat; and

15 a second random pile textile mat which is laden with rubber particles, and has a compact resin bonded fibrous stratum.

20 14. A playing surface structure according to Claim 13 wherein a second vertically lapped textile mat lies beneath the second random pile textile mat.

15. A method of construction of a playing surface comprising the steps of:

i) laying a layer of stratified fibrous material upon a substrate;

5 ii) laying a random pile layer, comprising a compact resin loaded stratum, over the layer of stratified fibrous material;

iii) laying a resin impregnated textile layer over the random pile layer; and

10 iv) laying a surface carpet layer over the resin impregnated textile layer.

16. The method of Claim 15 including laying a plurality of pieces of random pile layer and binding adjacent pieces of random pile layer using adhesive tape.

17. The method of Claim 15 including loading pile of the random pile layer with particulate material.

20 18. The method of Claim 15 including overlaying the random pile layer with a layer of particulate material.

19. The method of Claim 15 wherein such particulate layer is bonded to the resin loaded textile layer.

25 20. The method of Claim 15 comprising loading pile of the random pile layer, or overlaying the random pile layer with one of:

i) sand;

30 ii) rubber particles;

iii) sand and rubber particles.

21. The method of Claim 15 including laying a plurality of pieces of resin impregnated textile layer and bonding adjacent pieces of resin impregnated textile layer by means of adhesive tape.

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22. The method of Claim 15 including laying a plurality of pieces of surface carpet layer and binding adjacent pieces of surface carpet layer using adhesive tape.

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23. The method of Claim 15 including providing the adhesive tape in the form of hot melt bonding adhesive tape or applying hot or cold adhesive to a separate geotextile carrier.

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24. The method of Claims 15 wherein the or at least one random pile layer is manufactured by needle punching a resin impregnated randomly oriented fibrous mat to form a compact layer which is then subjected to a second needle punching operation by which a randomly oriented pile is extracted from the compact layer to leave a mat having a randomly oriented pile supported by a compact resin loaded layer.

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25. A playing surface structure comprising, in order:

i) a surface carpet layer having a sand laden pile;

5 ii) a resin impregnated textile layer having rubber particles bonded thereto;

iii) a first random pile textile mat which is laden with rubber particles, and which comprises a compact resin bonded fibrous stratum;

10 iv) a vertically lapped textile mat; and

v) a second random pile textile mat which is laden with rubber particles, and has a compact resin bonded fibrous stratum.

26. A method of construction of a playing surface comprising the steps of:

i) laying a layer of stratified fibrous material upon a substrate;

5 ii) laying a random pile layer, comprising a compact resin loaded stratum, over the layer of stratified fibrous material;

 iii) laying a resin impregnated textile layer over the random pile layer;

10 iv) laying a surface carpet layer over the resin impregnated textile layer;

 v) laying a plurality of pieces of random pile layer and binding adjacent pieces of random pile layer using adhesive tape;

15 vi) loading pile of the random pile layer with particulate material of sand and/or rubber particles;

 vii) overlaying the random pile layer with a layer of rubber particles bonded to the resin loaded textile layer;

20 viii) laying a plurality of pieces of resin impregnated textile layer and bonding adjacent pieces of resin impregnated textile layer by means of adhesive tape; and

25 ix) laying a plurality of pieces of surface carpet layer and binding adjacent pieces of surface carpet layer using adhesive tape.